## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent application of      :

Jae-yoon SIM et al.      :      Group Art Unit 2631

Serial No. 09/542,042      :      Examiner Pankaj Kumar

Filed March 31, 2000      :

HIGH FREQUENCY EQUALIZER USING DEMULTIPLEXING TECHNIQUE AND RELATED SEMICONDUCTOR DEVICE

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## REQUEST FOR RECONSIDERATION

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Sir:

This is in response to the Office action of August 29, 2003.

### *Allowable Claims*

Applicants acknowledge with thanks the indicated allowability of Claims 1-10 and 13-22.

### *35 U.S.C. ¶102*

Claims 11 and 12 were rejected under 35 U.S.C. ¶102 as being anticipated by Zhung et al. (US 5875007) for the reasons stated at pages 3-4 of the Office Action. However, Applicants respectfully contend that Claims 11 and 12 are not anticipated

by Zhung et al., and in view of the following representations, reconsideration of the rejection under 35 U.S.C. ¶102 is requested.

In the Office Action, the Examiner states:

> *Zhung teaches ... a restoring circuit for demultiplexing input*
> *data (Zhung fig. 3: 31) into a plurality of input data items*
> *(Zhung fig. 3: 32, 33, 36, 37) each having a time difference the*
> *same as period of the input data (Zhung fig. 4: time difference*
> *between rising and falling edges of 42, 45 and 46 is the same as*
> *the period of 41 between its rising and falling edges)... "*

Respectfully, the Examiner's comments are not understood, and clarification is therefore requested. Reference number 31 of Fig. 3 of Zhung et al. denotes the 8-bit header of each 808-bit frame of data contained in a 6.5 Mb/s signal. Reference numbers 32, 33, 36 and 37 denote payload, channel ID, CRC, and tail information, respectively, of the <u>same</u> frame of data. Col. 4, lines 13-27. The header 31 is not demultiplexed into the payload 32, channel ID 33, CRC 36 and tail 37 as apparently suggested by the Examiner.

In the Office Action, the Examiner further states:

> *"Zhung teaches ... restoring lost high frequency components of*
> *the plurality of demultiplexed input data items (Zhung figs. 1, 2:*
> *12 is 6.5MHz while 13 is 20.1312MHz), and outputting restored*
> *input data items in response to restoring clock signals (Zhung*
> *figs. 1, 2 output of 13) ... "*

The mere fact that the output of reference number 13 of Zhung of a higher frequency than that of reference number 12 does not mean that lost high frequency components have somehow been restored. Rather, reference number 13 of Zhung is a multiplexer for multiplexing overhead data and the 6.5 Mb/s signals from reference number 12. No restoration of high frequency components takes place. Further, Claim 11 is directed to restoring high frequency components of input data items obtained from a demultiplexed input signal. Zhung et al. does not teach this feature of the invention.

In the Office Action, the Examiner further states:

*"Zhung teaches ... a multiplexer for multiplexing the restored input data items (Zhung fig. 1, 2: 15) and sequentially outputting multiplexed data items one by one as restored input data (Zhung fig. 1, 2: output of 15), in response to the restoring clock signals (Zhung figs. 1, 2: 15 is in response to 110 and/or 13 since 15's input is through 13) ... "*

Applicants acknowledge that reference number 15 of Zhung et al. denotes a multiplexer (a DS3 multiplexer). However, in the context of Claim 11, there is no multiplexing of either (a) previously demultiplexed input data items, or (b) restored input items. Rather, the multiplexer 15 of Zhung et al. is for multiplexing the DS3 and other overhead with the 20.1312 Mb/s signal from the multiplexer 13.

Applicants can find no teaching or suggestion in Zhung et al. of the limitations of Claim 11, and accordingly, Applicants respectfully contend that Claim 11 is not anticipated by Zhung et al.

Also, at least in view of its dependency from Claim 11, Applicants respectfully contend that Claim 12 is also not anticipated by Zhung et al. Further, as suggested

above, the multiplexing of several lower frequency signals into a single higher frequency signal does not constitute a restoration of lost high frequency components. Zhung et al. does not teach or suggest at least the unit restoring circuits of Claim 12.

## Conclusion

No other issues remaining, reconsideration and favorable action upon all of the Claims 1-22 now pending in the application are requested.

Respectfully submitted,

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